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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,159

Applicant(s)

DINKEL ET AL.

Examiner

ROCCO ITALIANO

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-850)
- Paper No(s)/Mail Date 03/24/2005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Claim 28 objected to because of the following informalities: In order to maintain consistency of the terminology used within the claims, it is recommended that the term "the spring retainer" be substitute with the term "the bowl-shaped spring retainer" as claimed in the preceding claim 27 on which claim 28 depends. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-17 and 19-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claims 21 and 22 is unclear as to the inventive element the applicant is intending to claim in regards to the limitations "an equal design" and "a different design".

In regards to claim 23, is it unclear as to which element the "guiding portion" is acting upon "for radial centering and guiding."

In regards to claim 26, the limitations recited in lines 15-18 of the claim are interpreted by the examiner as contradictory in regards to "a larger number of locking arms", as claimed by the applicant, due to the prior limitation within claim 26 that recites

"at least one locking arm is provided". This portion of the claim is unclear and vaguely expressed and therefore has not been treated by the examiner for examination.

Claims 16-17, 20, 23, 25-27 recites the limitation "the cage part" in multiple lines of the claims.

Claim 19 recites the limitation "the two active fastening means" in line 2.

Claim 24 recites the limitation "the associated cage part" and "the correct position" in lines 2 and 3 respectively.

Claim 25 recites the limitation "the carrier-side accommodating area" in line 13.

Claim 26 recites the limitation "the cage" in line 8 and "the locking recesses" in line 17.

There is insufficient antecedent basis for these limitations within the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

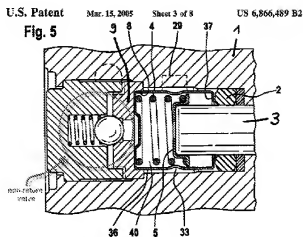
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16-17 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinz et al. WO01/70550 (U.S. 6,866,489 B2 is regarded by the examiner as an English equivalent and will be used as a reference from this point forward to point out figures and relevant sections within the disclosure) and further in

view of Hauser et al. WO01/73294 (U.S. 6,652,245 B2 is regarded by the examiner as an English equivalent and will be used as a reference from this point forward to point out figures and relevant sections within the disclosure).

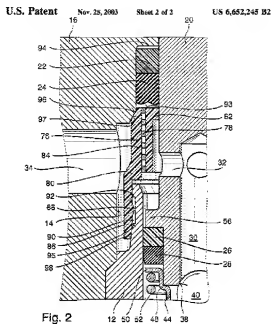
In regards to claim 1, Hinz et al discloses a piston pump, or supply device as designated by the applicant, for a controllable brake system comprising: a piston (3) movably arranged in an accommodating member (1); a carrier (9) arranged in a similar fashion as claimed by the applicant whereby the carrier (9) bears a non-return valve arranged coaxially to the piston (3) for the purpose of ventilating the working chamber (40) into which the piston (3) plunges (see Fig. 5 labeled by the examiner for clarity); a resetting spring (4) arranged between the carrier (9) and the piston (3) wherein a cage (36) is provided in which the resetting spring is inserted into the cage. The disclosure according to Hinz differs from the invention according to the applicant in that Hinz does not disclose any specifics in regards to the cage (36) as being constructed in a multi-piece method as well as any disclosure whereby a fastening means is provided in which to lock the cage due to relative displacement of the cage parts. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the cage in a multi -piece manner, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art.

Nerwin v. Erlichman, 168 USPQ 177, 179.



Furthermore, Hauser et al. discloses an analogous piston, or supply device as designated by the applicant, wherein cage part elements (12, 86) comprise a fastening means (88, 90) that lock the cage due to relative displacement of the cage parts (see Fig 2).

In regards to the limitation of the claim wherein the applicant recites that the resetting spring is caged and simultaneously elastically preloaded under the relative displacement the cage parts, it is considered by the examiner as a method step and therefore does not distinguish itself as patentably distinct over the prior art.



In regards to claim 17, Hauser discloses a feature analogous to a catch-type engagement, as described by the applicant, for fastening cage parts (12, 86) to one another and at least one locking arm (88) is provided on at least one of the cage parts (86) for engagement into a locking recess (90) of the associated cage part (12) (see Fig. 2).

With respect to claim 20, Hinz et al discloses a piston pump, or supply device as designated by the applicant, for a controllable brake system comprising: a piston (3) movably arranged in an accommodating member (1); a carrier (9) arranged in a similar fashion as claimed by the applicant whereby the carrier (9) bears a non-return valve arranged coaxially to the piston (3) for the purpose of ventilating the working chamber (40) into which the piston plunges (see Fig. 5 labeled by the examiner for clarity provided above); a resetting spring (4) arranged between the carrier (9) and the piston (3) wherein a cage (36) is provided in which the resetting spring is inserted into the

cage. The disclosure according to Hinz differs from the invention according to the applicant in that Hinz does not disclose any specifics in regards to the cage (36) as being constructed in a multi-piece method as well as any disclosure whereby a fastening means is provided in which to lock the cage due to relative displacement of the cage parts. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the cage in a multi-piece manner, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

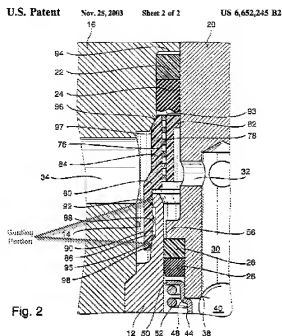
Furthermore, Hauser et al. discloses an analogous piston, or supply device as designated by the applicant, wherein cage part elements (12, 86) comprise a fastening means (88, 90) that lock the cage due to relative displacement of the cage parts (see Fig. 2). It can be seen in Fig.1 according to Hauser et al. that the cage part includes fastening means which are provided in pairs, comprising elements (88, 90) and are arranged similarly lying diametrically opposite each other, as described by the applicant.

In regards to claim 21, it is interpreted that the opposed fastening means of a cage part (88, 90) have an equal design in that each element corresponds in relationship to one another.

With respect to claim 22, it can be seen that the opposed fastening means (88, 90) of a cage part have a different design in that the fastening means is achieved through the utilization of a male (88) and female (90) element relationship ultimately yielding the cage parts to have a "different design" as claimed by the applicant.

In regards to claim 23, Hinz et al discloses a piston pump, or supply device as designated by the applicant, for a controllable brake system comprising: a piston (3) movably arranged in an accommodating member (1); a carrier (9) arranged in a similar fashion as claimed by the applicant whereby the carrier (9) bears a non-return valve arranged coaxially to the piston (3) for the purpose of ventilating the working chamber (40) into which the piston plunges (see Fig. 5 labeled by the examiner for clarity provided above); a resetting spring (4) arranged between the carrier (9) and the piston (3) wherein a cage (36) is provided in which the resetting spring is inserted into the cage. The disclosure according to Hinz differs from the invention according to the applicant in that Hinz does not disclose any specifics in regards to the cage (36) as being constructed in a multi-piece method as well as any disclosure whereby a fastening means is provided in which to lock the cage due to relative displacement of the cage parts. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the cage in a multi -piece manner, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Furthermore, Hauser et al. discloses an analogous piston, or supply device as designated by the applicant, wherein cage part elements (12, 86) comprise a fastening means (88, 90) that lock the cage due to relative displacement of the cage parts (see Fig. 2). Hauser et al. teaches further through the illustration of Fig. 2 that at least one cage part includes a separate guiding portion, for radial centering and guiding (see Fig. 2 labeled by the examiner for clarity).



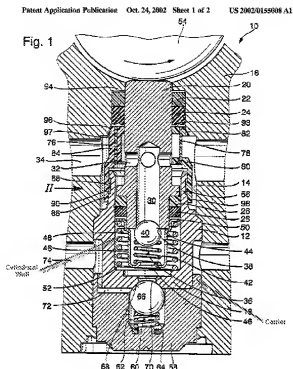
In regards to the limitation of the claim wherein the applicant recites that the resetting spring is caged and simultaneously elastically preloaded under the relative displacement the cage parts, it is considered by the examiner as a method step and therefore does not distinguish itself as patentably distinct over the prior art.

With respect to the limitations of claim 24, it is interpreted by the drawing of Fig. 2 according to Hauser et al. that the guiding portion has a rounded conical configuration, as outlined by the applicant, so that the associated cage part (12) is lead into the correct position during a locking operation.

With respect to claim 25, Hinz et al discloses a piston pump, or supply device as designated by the applicant, for a controllable brake system comprising: a piston (3) movably arranged in an accommodating member (1); a carrier (9) arranged in a similar fashion as claimed by the applicant whereby the carrier (9) bears a non-return valve arranged coaxially to the piston (3) for the purpose of ventilating the working chamber

(40) into which the piston plunges (see Fig. 5 labeled by the examiner for clarity provided above); a resetting spring (4) arranged between the carrier (9) and the piston (3) wherein a cage (36) is provided in which the resetting spring is inserted into the cage. The disclosure according to Hinz differs from the invention according to the applicant in that Hinz does not disclose any specifics in regards to the cage (36) as being constructed in a multi-piece method as well as any disclosure whereby a fastening means is provided in which to lock the cage due to relative displacement of the cage parts. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the cage in a multi-piece manner, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Furthermore, Hauser et al. discloses an analogous piston, or supply device as designated by the applicant, wherein cage part elements (12, 86) comprise a fastening means (88, 90) that lock the cage due to relative displacement of the cage parts (see Fig. 2). Hauser et al. discloses a cage part (12) with a cylindrical wall with which the cage is accommodated in the carrier (see feature labeled by the examiner in Fig. 1 provided) forming a modular unit. It can be seen in Fig. 1 according to Hauser et al. that the carrier-side accommodating area is provided independently of and spaced from the fastening means (88, 90) for the caged parts (see Fig. 1 labeled by the examiner for clarity).



In regards to the limitation of the claim wherein the applicant recites that the resetting spring is caged and simultaneously elastically preloaded under the relative displacement the cage parts, it is considered by the examiner as a method step and therefore does not distinguish itself as patentably distinct over the prior art.

In regards to claim 26, Hinz et al discloses a piston pump, or supply device as designated by the applicant, for a controllable brake system comprising: a piston (3) movably arranged in an accommodating member (1); a carrier (9) arranged in a similar fashion as claimed by the applicant whereby the carrier (9) bears a non-return valve arranged coaxially to the piston (3) for the purpose of ventilating the working chamber (40) into which the piston plunges (see Fig. 5 labeled by the examiner for clarity provided above); a resetting spring (4) arranged between the carrier (9) and the piston (3) wherein a cage (36) is provided in which the resetting spring (4) is inserted into the

cage. The disclosure according to Hinz differs from the invention according to the applicant in that Hinz does not disclose any specifics in regards to the cage (36) as being constructed in a multi-piece method as well as any disclosure whereby a fastening means is provided in which to lock the cage due to relative displacement of the cage parts. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the cage in a multi-piece manner, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

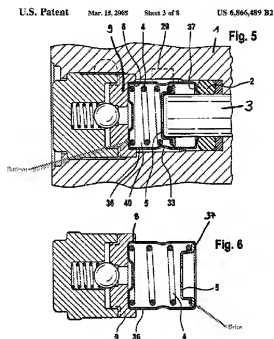
Furthermore, Hauser et al. teaches of an analogous piston, or supply device as designated by the applicant, wherein cage part elements (12, 86) comprise a fastening means (88, 90) that lock the cage due to relative displacement of the cage parts (see Fig. 2). Hauser also teaches of a feature analogous to a catch-type engagement, as described by the applicant, for fastening cage parts (12, 86) to one another and at least one locking arm (88) is provided on at least one of the cage parts (86) for engagement into a locking recess (90) of the associated cage part (12) (see Fig. 2).

In regards to the limitation of the claim wherein the applicant recites that the resetting spring is caged and simultaneously elastically preloaded under the relative displacement the cage parts, it is considered by the examiner as a method step and therefore does not distinguish itself as patentably distinct over the prior art.

In regards to claim 27, Hinz et al. discloses an arrangement of the resetting spring analogous to the limitations as claimed by the applicant whereby one end of the resetting spring (4) is directly moveable into abutment on a bottom of the cage part (36)

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and the other end of the resetting spring (4) is moveable into abutment on a brim (37) of the cage part by way of a bowl-shaped spring retainer (5) (see Fig. 5 and 6 labeled by the examiner for clarity).



With respect to claim 28, it can also be observed from the illustrations of Fig. 5 and 6 according to Hinz et al that a bowl wall of the spring retainer (5) extends over the piston's end (3) of the supply device.

In regards to claim 29, Hinz et al. discloses a spring assembly comprising of a cage (36) and a resetting spring (4) for use in an electronically controlled brake system wherein a cage (36) for the elastically preloaded casing of the spring is provided (see abstract and Fig. 5 and 6). The disclosure according to Hinz differs from the invention according to the applicant in that Hinz does not disclose any specifics in regards to the cage (36) as being constructed in a multi-piece method. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

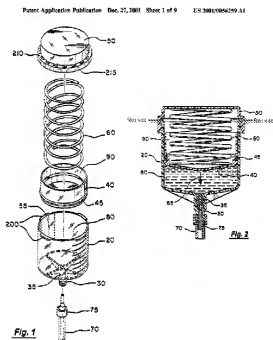
construct the cage in a multi -piece manner, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Furthermore, Hauser et al. teaches of an analogous piston, or supply device as designated by the applicant, wherein cage part elements (12, 86) comprise a fastening means (88, 90) that lock the cage due to relative displacement of the cage parts. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to construct a spring assembly disclosed by Hinz et al. further modified by the teachings of Hauser in order to obtain a multi-piece cage in which a fastening means is provided in order to lock the multi-piece cage together by the displacement of the cage parts in relation to each other.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinz et al. WO01/70550 in view of Hauser et al. WO01/73294 as applied to claim 16 above, and further in view of Skinkle et al. U.S. 2001/0056259 A1.

With respect to claim 18, it is unclear based on the teaching of Hauser et al. whether or not each cage part includes several fastening means. However, Skinkle et al. discloses a spring powered infusion pump which comprises several fastening means comprising at least two pair of fastening means with two locking arms (200) and two locking recesses which are active for locking similar cage parts (20, 50) (see the abstract and Fig. 1 and 2 labeled by the examiner for clarity). Therefore, based on the teaching of Skinkle et al. it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the invention according to Hinz et al. in view of

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Hauser et al. by increasing the amount of fastening means in order to effectively ensure secure coupling of the parts.



With respect to claim 19, it can be seen in Fig.1 and 2 according to Skinkle et al. that the two fastening means are arranged opposite each other.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROCCO ITALIANO whose telephone number is (571)270-3761. The examiner can normally be reached on Mon - Fri (Alt Fri Off) 9-5 EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon C. Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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04/21/2008